RECLAMATION

Managing Water in the West

Frequently Asked Questions
Stony Gorge Dam Modification

1. What's being done to strengthen Stony Gorge Dam?

The Bureau of Reclamation on September 22, 2006, awarded a contract to Shimmick Construction Company, Inc. of Hayward, California, to modify and strengthen Stony Gorge Dam to prevent its potential failure in the event of an earthquake.

2. Why is this being done?

The project is needed to ensure the safety of life and property in the areas downstream of Stony Gorge Dam. This includes a portion of the community of Elk Creek, a small number of residences downstream of the dam, and possibly the facilities at Black Butte Dam and downstream communities such as Orland and Willows.

3. What's the problem?

Stony Gorge Dam was identified as posing a possible flooding danger to downstream residents in studies performed since 2001. The studies indicated that a large earthquake event could cause the vertical concrete buttresses that support the upstream face of the dam to buckle, possibly leading to subsequent dam leakage or collapse. The Assessment Team determined that the dam is subject to earthquakes and exceeds Reclamation guidelines for dam safety, so the agency made a Safety of Dams recommendation to take action to reduce the danger associated with an earthquake near the dam.

4. Which alternative was chosen, and what alternatives were evaluated?

Potential alternatives were identified to increase support between the vertical buttresses of the dam. The alternative chosen is a concrete wall that will be built between the buttresses, tying them together to prevent their collapse. Non-structural alternatives that were not chosen identified included moving irrigation storage from Stony Gorge Reservoir to Black Butte Lake located downstream, implementing a reservoir restriction, removing the dam, or installing an early warning system and enhancing the Emergency Action Plan.

5. What would happen if you just left the dam alone?

The danger of flooding identified in Question 3 would remain. One of the alternatives considered to reduce the danger was to leave the dam alone, install an early warning system, and enhance the Emergency Action Plan. However, due to the close proximity of the town of Elk Creek, very little additional warning time was considered possible.

6. When will construction start?

Dam modifications are expected to begin in late 2006.

7. How long is this expected to take?

Construction is expected to take approximately 3 years to complete.

8. How much will this project cost?

The contract award was for $23,956,700.

9. Will local water users have to repay any of the cost? If so, why?

Yes. The Safety of Dams Act of 1978, as modified in 1984, requires that 15 percent of the modification costs are reimbursable to the Federal government. The 15 percent is allocated to the authorized purpose(s) of the dam being modified. Since the authorized purpose of Stony Gorge Dam is irrigation, the irrigation users will be responsible for repaying 15 percent of the modification costs. Those costs will be most likely spread out for up to 50 years for repayment. Communication with the Orland Unit Water Users' Association and its members will be continuous and ongoing throughout the project.

10. What effect will this project have on downstream residents and businesses?

The construction work area is isolated from all but a handful of residences located on Highway 306 within 1 mile of the dam. Temporary construction noises will be created, but noise levels will be low during operation, and lower than the noise created by spillway releases. The construction noise will consist of truck traffic and the mechanical piston noise caused by the concrete placements. There is also the potential for an increase in noise levels if the contractor decides to build a temporary concrete batch plant near the dam. The remote location of the construction site will prevent adverse effects on most of the residences or other noise-sensitive land-uses. Area businesses may enjoy an increase in sales during construction because many people will be working on the project.

11. What effect will this project have on downstream water users?

The work will minimally affect water releases and the operation of the hydroelectric powerplant operated by the City of Santa Clara's Silicon Valley Power.

12. What effect will this project have on recreation on the reservoir?

Recreational boaters may experience a temporary increase in noise and change in the visual character if they venture near the dam at the northwest end of the reservoir; however, the topography of the area will shield the recreational areas from most noise. Campers in the Pines Group Camp may experience a temporary increase in noise. Visitors may also experience a temporary drop of up to approximately 4.5 feet in the water levels that may occur earlier in the season than normal. If the contractor requests a reservoir drawdown to assist with construction, Stony Gorge Reservoir may be lowered to approximately elevation 836.5 feet from the normal level of 841 feet from June 15 through September 30 during each year of construction.

13. What effect will this project have on the environment?

All construction activities will be carried out in accordance with applicable Federal, State, and local laws and regulations concerning the prevention and control of air pollution. Impacts to air quality would be localized and of a short term nature. Short term increases in Stony Creek sediment at the construction site should be expected during the project. Construction noise will disturb and likely temporarily displace the area's wildlife. There are no known listed threatened or endangered species living in the immediate area of the dam.

14. I thought you already fixed the dam back in the 1980s? Why are you doing it again?

In 1986 the dam was modified to reduce the danger posed by extreme flood events that could overtop the dam. The fix only included modifying the dam to allow overtopping on the right side and placing a concrete slab downstream of the dam to prevent damage to the foundation. These changes only addressed flood dangers. The currently proposed modifications are designed to prevent the danger described in Question 3 during large earthquake events.

15. Is there any danger of flooding if the dam breaks while you're working on it?

The danger scenario for an earthquake causing problems at the dam would remain the same as identified in the studies performed since 2001. There is no anticipated increase in danger to downstream residents during construction. The occurrence of flood flows during construction will be addressed in interim flood operating criteria. A Construction Emergency Action Plan is being developed.

16. Who can I call for more information on this project?

Please contact the Mid-Pacific Region Public Affairs Office at 916-978-5100. More information is also available on the Internet at www.usbr.gov

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